

in cross-section, consists of a central] comprises an approximately circular fibre core [(16)] of high compression and buckling strength and [of] longitudinal ribs [(17)] of softer fibre structure and with a coarser capillary structure which extend radially [outwards] outwardly from the fibre core and which are separated from one another by outwardly open longitudinal grooves [(18), and in that, accordingly,] whereby only the [soft] longitudinal ribs [of the preform (15)] have been exposed to a low uniform pressure, radial relative to [the] a longitudinal mid-axis of the preform, in such a way that [the] outer ends of the longitudinal ribs [form] exhibit a soft [essentially smoothly cylindrical] smooth surface [of smaller diameter], with the coarser capillary structure corresponding to the final form of the tampon being maintained [(10)].

2. (Amended) Tampon according to Claim 1, wherein the blank [of which is produced from] comprises a needled nonwoven tape consisting of 100% rayon fibre, [characterized in that] wherein the tampon, [with] has a weight of 2.4 g without the recovery tape, and has a specific absorption capacity of 4.8 ml/g at an absorption rate of 1.9 ml/s.

3. (Amended) Tampon according to Claim 2, [characterized in that] wherein the absorption capacity [of the tampon amounts to] is about 11.3 ml at a static counterpressure of 20 mbars.

4. (Amended) Tampon according to [Claims 1 to 3, characterized in that,] Claim 2, wherein at a pulsating counterpressure of 20 to 110 mbars, the absorption capacity of the tampon [amounts to] is about 8.0 ml and the specific absorption capacity [to] is about 3.4 ml/g.

5. (Amended) Tampon according to [one of Claims 1 to 4, characterized in that] Claim 2 wherein the diameter of the tampon[, in its final form, amounts to] is between 13 and 15 mm, the central fibre core having a diameter of 4 to 8 mm.

6. (Amended) Process for producing [the] a tampon [according to Claims 1 to 5,] in which an essentially cylindrical blank is shaped by the steps of: winding up a portion of length of tape-shaped nonwoven material[, the] i radially pressing a circumferential surface of [which is pressed radially] the blank relative to [the] a longitudinal mid-axis of the blank over an even number of at least six portions mutually adjacent in the circumferential [direction] surface of the

[winding] blank, [characterized in that] whereby only narrow strip-shaped portions of the circumferential surface of the [winding] blank, which are arranged at equal angular distances from one another, are pressed to produce a preform which, [as seen] in cross-section, consists of a central approximately circular fibre core of high compression and buckling strength and of longitudinal ribs of a softer fibre structure with a coarser capillary structure which extend radially outwards from the fibre core and which are separated from one another by outwardly open longitudinal grooves, [and in that, accordingly,] whereby only the [soft] longitudinal ribs [of the preform] are exposed to a low uniform pressure, radial relative to [the] a longitudinal mid-axis of the preform, until the outer ends of the longitudinal ribs have formed a soft essentially [smoothly cylindrical] smooth surface [of smaller diameter,] with the coarser capillary structure corresponding to the final form of the tampon being maintained.

9. (Amended) Apparatus for producing [the] a tampon [according to one of Claims 1 to 8 and for carrying out the process according to one of Claims 6 to 8, consisting of] comprising: two groups of [altogether] at least six press dies arranged in a plane perpendicular to [the] a press axis[, the]; a first group of press dies forming press segments[, of which the]

comprising side flanks[, ] in [the closing] a closed position of the press segments, that form respectively for each of [the press dies of the] a second group of press dies, guide surfaces which are designed as sliding plates, wherein in [the] a closed state [the] end faces of the press dies [forming] form an essentially cylindrical pressing face, [characterized in that] whereby the press segments [(22)] and the sliding plates [(24)] form a preforming press for [the] pressing [of] a preform [(15)], and press cutters [(27)] projecting from the end faces [(25, 26)] of the press segments [(22)] and of the sliding plates [(24)], and in] such that the preforming press is followed by a stationary conical forming die [(29) which is] arranged coaxially relative to the press axis, [and] the die having an entry orifice [(30)] [of] which is calculated to match the diameter of [the] an orifice of the preforming press, when its press dies [(22, 24)] are in the closed state, and [the] an exit orifice [(32) of which is] calculated to match the final cross section of the finished tampon (10).

11. (Amended) Apparatus according to [Claims 9 or] Claim 10, [characterized in that] wherein all the press cutters [(27)] have the same pressing faces [(28)].

13. (Amended) Apparatus according to [Claims 9 or] Claim 10, [characterized in that] wherein the press cutters [(27)] have pressing faces [(28)] of differing form.

14. (Amended) Apparatus according to [one of Claims 9 to] Claim 13, [characterized in that] wherein the length and width of the press cutters [(27)], [radial] radially relative to the press axis [(21)], [amounts to] are about 10 and 2 mm respectively.

15. (Amended) Apparatus according to [one of Claims 9 to] Claim 14, [characterized in that,] wherein when the press is in the closed state, the pressing faces [(28)] of the press cutters [(26)] assume a clear distance [of] from 2 to 4 mm from the press axis [(21)].

17. (Amended) Apparatus according to [one of Claims 9 to] Claim 16, [characterized in that] wherein all the press dies [(22, 24)] are first closable concentrically relative to the press axis [(21)] to approximately the diameter of the winding blank [(11),] and subsequently the press segments [(22)] of the first group of press dies are simultaneously movable concentrically into the closing position, and thereafter the

sliding plates [(24)] of the second group of press dies are movable to the final dimension of the preform [(15)].

18. (Amended) Apparatus according to [one of Claims 9 to] Claim 16, [characterized in that] wherein the press segments [(22)] and the sliding plates [(24)] are simultaneously movable concentrically relative to the press axis [(21)] into [the closing] a closed position which corresponds to the final dimension of the preform [(15)].

19. (Amended) Apparatus according to [one of Claims 9 to] Claim 18, [characterized in that, arranged on the input side of the preforming press, there is] further comprising a ram [(33)] arranged on the input side of the preforming press which is movable axially [to and fro] for ejecting [the] a preform [(15)] from the preforming press and for pushing [the] a preform through the conical forming die [(29)].

Please add new claim 20 as follows:

--20. A tampon formed by compressing selected areas of a blank, the tampon comprising:  
a compressed, approximately circular fibre core;  
and  
at least six longitudinal ribs extending from the core that are less compressed relative to the core.--

REMARKS

Claims 1-19 are pending in this application. Certain claims have been rejected under 35 U.S.C. §112, second and fourth paragraphs in view of their multiple dependent form and as being indefinite. The drawings and specification have been objected to, and other informalities have been noted. Claim 1 has been rejected under 35 U.S.C. §102(b) as being anticipated by either U.S. Patent No. 3,422,496 -- Wolff et al. or U.S. Patent No. 4,453,296 -- Friese. All these reasons for rejection are respectfully traversed. The rejected claims have been amended, and as amended, they patentably define the present invention over the prior art and are in full compliance with §112. Reconsideration is therefore respectfully requested.

The present invention discloses a tampon formed from a blank that has a circumferential surface that is pressed radially over an even number of portions mutually adjacent along the